

**Cost Effective Solution On Maintenance Expenditure  
For TNB Kuala Lumpur Region**

**Hanaffi Bin Daud**

**University Of Malaya  
1997**

## TABLE OF CONTENTS

Chapter	Page
1. INTRODUCTION	1
1.1 A Brief History Of TNB	1
1.2 Transmission Maintenance Department (Kuala Lumpur)	2
1.3 The Objectives Of This Study	5
2. LITERATURE REVIEW	5
2.1 Capital Budgeting	5
2.2 Steps In Capital Budgeting	7
2.3 Cost Planning And Budget	7
2.4 Control And Reduction Of Direct Labor Cost	10
2.5 Privatisation	10
3. TENAGA NASIONAL BERHAD BUDGET	13
3.1 Description Of Department's Budget	13
3.2 Budget Procedure	14
4. SCOPE OF MAINTENANCE WORK	17
4.1 Substation	17
4.2 Overhead Line	17
5. EVALUATION OF CURRENT PRACTICE	20
5.1 Transportation	20
5.2 Substation Maintenance	20
5.3 Overhead Line Maintenance	21
6. STRATEGIC ANALYSIS	21
6.1 SWOT Analysis	21
6.2 Salary And Overtime Scheme	23
7. OBSERVATION AND EVALUATION	32
7.1 Substation	32
7.2 Overhead Line	33
7.3 Transportation	33
7.4 Areas Of Improvement	33
8. EVALUATION ON THE NEW PROPOSAL	34
8.1 Privatising Out Maintenance Section	34
8.2 Proposal On The Maintenance Section	37
8.3 Recommendation On The Remunerations And Salaries Scheme	38
8.4 Cost Estimate Under This Scenerio	38
9. OUTSOURCING THE MAINTENANCE WORK	42
9.1 The Tender Process	43
9.2 Types Of Contract	45
9.3 Evaluation On Outsourcing The Maintenance Work	45



## ACKNOWLEDGEMENTS

I wish to express my sincere appreciation to my supervisor, Dr. Mansor Md. Isa for his guidance and helpful advice that enabled me to successfully complete the study.

I am very grateful to Tenaga Nasional Berhad for providing me the opportunity to pursue my MBA. I also wish to express my honest appreciation to my assistant for taking over my job responsibilities while I was attending MBA classes.

I wish to express my deepest appreciation to my wife and my two children for being so patient with me, especially during the taxing period of this study.